

In the claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1        1. (canceled).

1        2. (currently amended) An automated method for designing an integrated circuit layout  
2 with a computer, comprising:

3            (a) selecting a plurality of cells that are intended to be used in the integrated circuit  
4 layout;

5            (b) determining initial delay values for associated with the selected plurality of cells in  
6 order to satisfy delay constraints prior to determining an initial placement of the cells; and

7            (c) performing an initial a placement of the selected plurality of cells after determining  
8 said delay values, the placement including assigning loads for the selected plurality of cells and  
9 determining a an initial size or area of the selected plurality of cells in response to the said  
10 assigned loads and said delay values initial placement.

1        3-4. (canceled).

1        5. (currently amended) The automated method of claim [[4]] 2 further comprising:  
2            determining [[a]] the size or area of the cells that will approximately maintain the  
3 adjusted said delay values determined prior to said placement.

1        6. (canceled).

1        7. (previously presented) The automated method of claim 2 further comprising:  
2            routing the digital circuit to generate the integrated circuit layout using a finalized size or  
3 area of the selected plurality of cells.

1        8. (currently amended) The automated method of claim 2 wherein the initial said delay  
2 values are determined using gain.

1        9. (currently amended) The automated method of claim 2 wherein ~~the initial~~ said delay  
2 values are determined using logical effort.

1        10. (currently amended) The automated method of claim 2 wherein ~~the initial~~ said delay  
2 values are determined by finding a preferred gain of the cells.

1        11. (previously presented) The automated method of claim 10 wherein the preferred gain  
2 of the cells is determined using a continuous buffering assumption.

1        12. (currently amended) The automated method of claim 2 wherein ~~the initial~~ said delay  
2 values are determined during library analysis.

1        13. (currently amended) The automated method of claim 2 wherein ~~the initial~~ said delay  
2 values are determined using a typical load of the cells.

1        14. (previously presented) The automated method of claim 13 wherein the typical load is  
2 determined based on gain considerations.

1        15. (previously presented) The automated method of claim 2 wherein the size or area of  
2 the cells is variable and not fixed at the time the cells are selected.

1        16. (previously presented) An automated method for designing an integrated circuit  
2 layout with a computer of a circuit specified by a netlist, comprising:  
3            (a) providing a library of cells;  
4            (b) determining initial delay values for a plurality of cells from said library of cells to be  
5 used in the integrated circuit layout of the circuit before determining an initial size or area of the  
6 cells, and using a timing driven covering method to map said plurality of cells to the circuit; and  
7            (c) performing an initial placement of the cells, including assigning net lengths to nets on  
8 the cells, and determining the initial size or area of the cells in response to the initial placement.

1        17. (previously presented) The automated method of claim 16, including

2           inserting buffers based on an estimation of area savings in the circuit prior to determining  
3    said initial size or area of the cells.

1           18. (previously presented) The automated method of claim 16, including  
2           compressing or stretching delay values associated with cells prior to determining said  
3    initial delay values for the cells.

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